



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Takeshi Kamio, et al.

Serial No.: 09/987,404

Group Art Unit: 1731

Filed: November 14, 2001

Examiner: John M. Hoffman

For: METHOD FOR SINTERING POROUS-GLASS MATERIAL, AND METHOD FOR
MANUFACTURING PREFORM AND OPTICAL FIBER

DECLARATION UNDER 37 C.F.R. § 1.132

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

We, Takeshi Kamio and Makoto Yoshida, hereby declare and state:

THAT we are citizens of Japan residing at Gunma-ken Japan;

THAT we graduated from Science University of Tokyo, and Kobe University,
receiving a Bachelor Degree of Chemistry of Industry, and Master Degree of Chemical Science
and Engineering, respectively;

THAT we are familiar with the Office Action dated April 19, 2006, where the Examiner
asserted that Claims 1 and 3-7 are rejected in view of U.S. Patent No. 5,306,322 to Ishikawa and
that Claims 8, 10-15 and 17 are rejected in view of Ishikawa and U.S. Patent No. 5,306,322 to
Antos. In particular, where the Examiner maintains that the claimed range for the outer diameter
(d) of the porous-glass material recited in independent claims 1, 8 and 15 is obvious in view of
Ishikawa;

THAT we are co-inventors of the above-identified application;

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With respect to the range recited in the claimed invention, we state and declare that a porous-glass material having an outer diameter d mm, shown in the table below, and a length of 3000 mm was vitrified using the sintering apparatus (shown in Figure 1 of the present application) in the same method indicated in the Examples of the specification (e.g., see Application at pages 13-16). In performing the test, 50 test pieces (porous-glass material) were used in tests numbers 1-4. The test results are provided in the following table.

Test No.	d (mm)	D (mm)	D/D	Number of test pieces of which surface was not damaged.	Number of test pieces of which surface was damaged.	Number of test pieces caused damage to the furnace.
1	350	400	0.88	50	0	0
2	360	400	0.90	50	0	0
3	370	400	0.93	34	16	0
4	380	400	0.95	0	50	3

In the cases where $d/D < 0.9$ (tests numbers 1 and 2), the surface of the porous-glass material is not damaged even though the porous-glass material rotates and swings to one specific direction in a furnace. This is because a porous-glass material does not contact with a sidewall of the furnace since there is sufficient space between the porous-glass material and the sidewall

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of the furnace. As shown in the table above, none of the 50 pieces had surfaces that were damaged.

In the cases where $d/D > 0.9$ (test numbers 3 and 4), a lower part of the surface of a porous-glass material is damaged when the porous-glass material rotates and swings to one specific direction in the furnace. This is because a lower part of the porous-glass material of which a side is not held by a rotation mechanism of the furnace contacts with a sidewall of the furnace, since there is not sufficient space between the porous-glass material and the sidewall of the furnace.

As shown in the table above, in the case where $d/D = 0.93$ (test number 3, which is the same ratio of d/D as is disclosed in Ishikawa), 16 test pieces out of 50 resulted in asperity of the surface of the porous-glass material, which was caused by peeling of the surface of the porous-glass material and a broken piece of the damaged portion of the furnace becoming adhered to the surface of the porous-glass material.

Additionally, in the case where $d/D = 0.95$ (test number 4), all of the 50 test pieces resulted in the same drawback as that of test number 3. Furthermore, in executing the test, the furnace was broken three times by contacting a porous-glass test piece.

Therefore, we disagree with the Examiner's allegation that the claimed range for the outer diameter (d) of the porous-glass material recited in independent claims 1, 8 and 15 is obvious in view of Ishikawa.

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We declare further that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: 23th June, 2006

Date: 29. June, 2006

T. Kamio
Mr. Takeshi Kamio

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